

# **The Loudoun County Strategic Watershed Management Solutions (SWMS)**

February-June, 2006

## **"DECLARATION OF COOPERATION"**

**\*\*\*\*\*DRAFT 4/20/06\*\*\*\*\***

### **I. DOC BACKGROUND**

This Declaration of Cooperation (DOC) was created in Spring 2006 to serve as a compendium of the recommendations developed by the Loudoun Strategic Watershed Management Solutions (SWMS) Team over four meetings held in February to June 2006. The DOC represents significant thought and effort on the part of key stakeholders, and it draws on the lessons learned from other Virginia counties that have already undertaken watershed planning. Because watershed planning can be a contentious and divisive undertaking, Loudoun County staff envisioned the need to bring all key stakeholders together at the outset to create a shared consensus strategy and process for watershed planning that the County and stakeholders, together, could both support. This DOC, as a result, provides consensus parameters and guidance for the Watershed Planning process. Each of the SWMS Team members, by signing this DOC, is making a commitment on behalf of their organization or agency to support the process outline in the DOC. Finally, at the end of this DOC, SWMS Team members have specified continuing organizational commitments to the Watershed Planning process.

### **II. NEED FOR A COMPREHENSIVE WATERSHED PLAN**

Loudoun County has a number of important programs and activities related to watershed management, however, they can be disconnected efforts. Currently there is no county-wide watershed plan, or no watershed-based plan for managing the County's water resources. The County currently manages its water resources through a variety of programs, but they can lack consistent coordination because they are administered through different Departments and may be managed on a case-by-case or site-specific basis. Much like the County's Capital Improvement Plan that brings together in one place all of the county's needs and priorities for capital improvements, a watershed plan will bring together in one place, for the first time, all of the County's needs and priorities for managing its water resources.

A watershed plan will provide the Board of Supervisors with an integrated picture of Loudoun's federal and state obligations for removing pollutants from Loudoun's waters, combined with its priorities for protecting drinking water and preventing pollution of currently clean waters. Bringing all of this information together is essential, particularly as federal and state governments are increasing their mandates relating to water quality and water supply planning. The watershed plan will achieve several goals.

1. The plan will provide guidance on a county-wide basis for assessing the current condition of Loudoun's waters; this assessment will identify waters in need of remediation or restoration and those in need of protection from becoming degraded.
2. The plan will prioritize the areas needing attention first and create a specific plan of action, based on a set of criteria to be established and a cost-benefit analysis. Actions may include:

- a. specific on-the-ground stream restoration, stormwater management, or other infrastructure projects;
  - b. policy recommendations to achieve improved protection of Loudoun's waters;
  - c. education and partnership projects that will improve citizen involvement in protecting Loudoun's waters. Implementation of this plan will be at the direction of the Board of Supervisors (BOS), and will also involve the approval and support of County partners.
3. The plan will also identify sources of funding and create a strategy for funding watershed plan implementation.
4. Implementation of the plan will help create healthy water resources which are economically valuable. Water resource protection activities in agricultural, residential, and urban areas will often provide economic benefits to the landowner, along with the expected environmental benefits. Restoring stream buffers and protecting wetlands, floodplains, and ground water recharge areas will reduce erosion and flooding, as well as maintain the quality and quantity of surface water and groundwater for drinking water supplies.

Further information about the content and nature of a watershed plan may be found in Appendix   .

### **III. BACKGROUND OF SWMS**

The Loudoun Strategic Watershed Management Solutions (SWMS) is a collaborative initiative to coordinate existing watershed efforts and define a shared vision for managing Loudoun County's watersheds. A stakeholder group was convened by Loudoun County's Department of Building and Development and facilitated by the University of Virginia's Institute for Environmental Negotiation (IEN). Funding for the project is provided by the National Fish and Wildlife Foundation, U.S. Environmental Protection Agency, and Loudoun County.

The first step in the SWMS initiative was the formation of a stakeholder group called the "SWMS Team." During January and February 2006, IEN conducted 17 interviews with stakeholders representing different perspectives and interests about the development of a strategy for watershed planning in Loudoun County. These interviews were conducted in preparation for the first SWMS Team meeting to help shape the agenda, identify the kind of information and speakers needed at the first meeting, inventory activities and studies relevant to Loudoun's Watershed Planning effort, and identify issues and concerns that would need to be discussed. With this information, IEN developed a summary of its findings as well as an inventory of watershed activities, studies, and sources of data. Drawing on recommendations from county staff and a number of stakeholders interviewed during the convening process, over 125 people who represent the interests of federal, state, regional, local government (County and Towns), water supply, environmental and conservation groups, farming, business, development, and homeowner associations were invited to participate. Of those invited, approximately 65 (Number to be filled in by IEN at the end of the process) people participated in the four SWMS meetings, February 22-23, March 23-24, May 4, and June 6, in which decisions were made by consensus.

Through the SWMS meetings and after much deliberation, discussion, and hard work, the Team developed a number of key recommendations regarding the development of a Watershed Plan for Loudoun County. The key areas of agreement developed by the SWMS Team are below, with details about each area of agreement following in the body of the Declaration of Cooperation (DOC).

The SWMS Team understands that the Watershed Planning process will need to use an adaptive management approach in which changes in the planning process are made as experience is gained and

lessons learned. The agreements reached represent recommendations by the SWMS Team, and it is recognized they may need to be modified to reflect revised timelines or available resources. The Team recommends the establishment of a steering committee that will support the adaptive management approach by providing a mechanism to collaboratively make changes to the recommendations contained in this Declaration of Cooperation.

## **KEY AREAS OF AGREEMENT**

### **IV. GUIDING PRINCIPLES, VISION, VALUES, AND GOALS**

The following guiding principles, vision, values, and goals are recommended for a watershed plan for Loudoun County.

**A. Principles** – The following are principles recommended to guide the Watershed Management Planning process:

1. Create a realistic, achievable, implementable, balanced plan based on scientific data and models that are accepted by professional scientists in the field.
2. Create a flexible, dynamic, and simple plan.
3. Address resources for implementation in the Watershed Planning process (monetary, in-kind and staff).
4. Consider economic development, jobs, housing (current and future), agriculture, and conservation land needs in the creation of the plan.
5. Provide a plan based on consensus among the diverse views.
6. Provide a collaborative approach that allows stakeholders to work together to provide support and not duplicate individual efforts or projects.

**B. Vision** -- The following vision is recommended for Loudoun County's watershed plan:

Loudoun County is a place where people appreciate the beauty and value of their natural and cultural resources; enjoy a robust economy, recreate in swimmable and fishable waters, and respect diverse natural habitats. Loudoun's citizens are informed, energized, active stewards committed to healthy watersheds for this and future generations.

**C. Values** -- The following values are recommended to drive Loudoun County's Watershed Planning effort and **to meet the needs of future generations:**

1. Clean drinking water is available for all Loudoun citizens.
2. The needs of future generations are met. **[One person suggested deleting this phrase and moving it above.]**
3. All Loudoun citizens are engaged, informed, and active in watershed planning.
4. Economic development opportunities are preserved in the watersheds.
5. Nature and natural systems (i.e. buffers) essential for good water quality are protected in all Loudoun streams.
6. Stewardship is recognized as a community responsibility and encouraged in every watershed.
7. Recreational use of the water resources is available for all Loudoun citizens.

8. Healthy stream habitats and aquatic life populations are protected in all Loudoun streams.
9. Agricultural heritage is preserved and its future viability is ensured through appropriate planning and zoning. [addition]

**D. Goals** -- The following broad goals are recommended for Loudoun County's Watershed Planning effort:

1. Protect public and environmental health.
2. Manage runoff in accordance with generally accepted practices to protect stream channel processes and protect and restore water quality, stream health, and groundwater resources.
3. Protect water supply for current and future demands for both ground water and surface water, through private and public means (e.g., regulations and voluntary efforts).
4. Protect and restore diverse habitats and riparian buffers to provide healthy streams and public recreation opportunities.
5. Preserve the economic value of healthy watersheds by protecting the natural functions of watersheds including wetlands and floodplains.
6. Preserve and enhance economic-related opportunities in Loudoun County, including the preservation of agriculture as a significant economic contributor, through the implementation of goal-specific, land use policies and zoning strategies. [Language modified from original]. [One person asked "Does this cover construction of homes?"]
7. Raise awareness of citizens, engage citizens in planning efforts, and utilize citizen input.
8. Promote cooperation, and coordinate government and non-government watershed management efforts, data, and resources within the watersheds.
9. Utilize existing regulations and ordinances where possible, and develop new regulatory tools that are necessary to support the stated goals of the watershed management plan.
10. Promote cooperation between government entities to improve water resource quality. [One person suggested deleting this phrase and adding it above to #8.]

## V. Scope and Overall Process for Loudoun Watershed Planning

- A. Two-Phased Approach** -- The SWMS Team recommends a two-phased approach to develop watershed plans. This phased approach will provide the County with a way to immediately begin watershed planning using currently available data at a minimum cost. It will also allow the County to enhance the quality and sophistication of its plans over time as grant and other funding becomes available.
- B. Phase I** -- Watershed management planning can proceed immediately using already acquired or existing data in a cost-effective manner. In this phase, three different types of plans are recommended in recognition of the different scope and scale of legal requirements and needs for watershed planning.
  1. **Tier I: Regional Plan:** Loudoun County watersheds extend into adjoining counties, and are part of the larger Chesapeake Bay Watershed. It is recommended that a Regional Watershed Plan defined by the geographic boundaries of the watersheds be developed in cooperation with neighboring jurisdictions and regional authorities. The planning process for Loudoun

should begin with Fairfax County who has begun developing watershed plans, and continued with other authorities as the opportunity arises.

2. **Tier II: Major Watershed Plans:** Individual Watershed Management Plans that are defined by both the political boundaries of the County and watershed boundaries are recommended to be developed for the twelve major watersheds in Loudoun County. These plans will involve working with stakeholders within those watersheds, and providing communication and coordination regarding those plans at the County-wide level. Individual watershed management plans, using existing data, should be developed for: (1) Sugarland Run, (2) Broad Run, (3) Lower Goose Creek and Little River, (4) Beaverdam Creek, (5) Middle Goose Creek and Panther Skin Creek, (6) North Fork Goose Creek, (7) Upper Goose Creek and Gap Run, (8) Limestone Branch, (9) Catoctin Creek, (10) Dutchman's Creek and Piney Run, (11) Upper Bull Run, and (12) Cub Run.
3. **Tier III: Subwatershed Implementation Plans:** Preliminary Subwatershed Implementation Plans should be developed as supplements to each of the major watershed plans. The subwatershed plans should be defined by both subwatershed boundaries and characterization of the subwatershed, selected from one of four possible characterizations defined by the Center for Watershed Protection. Each subwatershed plan will provide implementation strategies to protect and restore the water quality and stream health in specific portions of the watershed. The order in which these supplemental plans are developed should be based on a prioritization system that selects the "most vulnerable" watersheds based on projected future impacts, with preference given to headwater subwatersheds, drinking water sources, and vulnerability potential.
4. **Concurrent Planning Approach** -- The regional watershed management plan, the 12 major watershed management plans, and the preliminary subwatershed implementation plans should be developed in parallel, at the same time, using currently existing data, beginning as soon as practicable.

**C. Phase II** – More sophisticated watershed management plans can be developed when County or other resources are available to collect and analyze additional data, based on established priorities. The data collection could focus on: (1) filling identified data gaps, (2) developing sophisticated predictive models to assess degradation impacts under varying loading and growth conditions (see Section IV below), (3) developing detailed subwatershed implementation plans based on stream surveys, and (4) assessing progress in achieving planning goals based on water quality and stream health data collected under probability and trend monitoring approaches.

1. **Detailed Field Surveys** -- Additional field surveys should be conducted in each subwatershed to provide updated and more detailed data. These detailed field surveys, which could use the Center for Watershed Protection's Rapid Stream Assessment Technique (RSAT), should be used to assess the pathways of runoff to streams, hydrological impacts of increased runoff, impacts on aquatic life, impacts on habitat, and geomorphological impacts.
2. **Updated Implementation Plans** -- These field survey results can be used to revise the preliminary subwatershed implementation plans into more detailed, long-term implementation plans.

**D. Collaborative Governance Approach** – A County-wide Stakeholder Steering Committee should be established to provide policy and technical oversight for the watershed management process. The Stakeholder Steering Committee can guide implementation of this Declaration of Cooperation and ensure that an "adaptive management" approach will be used to make changes to the watershed planning process as experience is gained and lessons learned. Technical subcommittees and stakeholder committee should be established to provide input and guidance to

the different types of watershed plans as needed. The SWMS Team also recommends establishing subwatershed committees, if needed, with liaisons from the subwatershed committees serving on the County-wide Stakeholder Steering Committee.

## IV. Modeling

**A. Decision-Making Tool** -- Computer modeling can be a helpful decision-making tool for the watershed planning process. It can be used to forecast the impact of different management strategies, and therefore help in the selection of preferred management practices. The principal use envisioned for modeling in the Loudoun Watershed Planning process is to provide better information for decisions regarding water quality and water quantity (water supply planning) for both surface and ground water.

1. **Surface Water Modeling** -- For surface water quality and quantity, the models can offer predictive guidance for aquatic, drinking, and recreational values of streams, specifically addressing at least sediment, nutrients, and flow variation (“flashiness”).
2. **Ground Water Modeling** -- For ground water quality and quantity, the models can offer predictive guidance for fecal nonpoint source pollution and base flow, but will not generally be able to answer the question of ground water availability in western portions of the County.
3. **Modeling Choices** -- The Team recognizes that there are a wide range of models available that can vary greatly in cost, complexity, ease of application, and ability to use in-house. In light of the above, the Team recommends that the County adopt a phased approach, as described below. In addition, the Team recommends that the modeling information be shared with the public in an accessible and understandable format, perhaps via the Internet.

**B. Phase I Modeling** -- The Team recommends that the County begin its watershed planning with a least-cost predictive tool that does not require data beyond what is already available, that is simple, and can be used in-house by Loudoun County staff.

1. **Water Quality** -- For predicting impacts of different management options on water quality, consider selecting either a basic spreadsheet (such as STEPL) or the slightly more sophisticated Generalized Watershed Loading Function (GWLf) model, both of which will address nitrogen, phosphorous, and sediment. Experience in other localities has shown it is important that whichever model the County selects, the same model be applied across the entire County to ensure consistency of analysis and predictive value.
2. **Water Quantity** -- For predicting impacts of different management options on water quantity, consider selecting a spreadsheet model to do “water balance accounting.” It is understood that this would allow the County to make only rough predictive calculations of impacts on water quantity at an early phase of watershed planning. However, as more data is gathered over time, the County may be able to graduate to a more refined model to make more refined calculations.
3. **Ground Water** -- For predicting impacts of different management options on groundwater, it is recommended that existing data are compiled and analyzed, as much data is already available but has not been analyzed. It is also important that existing data and analyses already undertaken by agencies such as the USGS and DEQ be obtained by the County to avoid duplication of effort. The USGS has agreed to provide input and assistance in the County’s modeling and data synchronization efforts.
4. **Floodplains** -- For predicting impacts of different management options on floodplains, consider obtaining existing modeling from FEMA to incorporate into the plan.

**C. Phase II Modeling** -- As the County progresses in its Watershed Management Planning effort, it may need more sophisticated predictive capability. When more data are gathered and becomes available, the County should consider the following approaches which may require additional funding and staffing capacity to accomplish.

**1. Water Quality and Quantity** -- For more sophisticated predictions of impacts of different management options on both water quality and quantity, the County should first inventory data available to decide which of the more sophisticated models would be most feasible to use. The current choices are either EPA's dynamic rainfall-runoff simulation model (SWMM) or the Hydrologic Simulation Program-Fortran model (HSPF). Both models are appropriate for Loudoun's mix of urban/rural land use, and could be used to predict nutrients, sediments, as well as flow variation and base flow. The HSPF model already has been used to develop two TMDLs for fecal coliform in Loudoun County, and so could be adapted for these broader predictive purposes as well as expanded to provide coverage for the entire County via extrapolation. As a result, the Team suggests that the HSPF might be preferable to the SWMM model, but the County should make this determination when the time is appropriate. The Team also suggests the County consider using a flexible, selective approach in which more sophisticated models would be used for more complex, difficult watersheds.

**2. Ground Water** -- For more sophisticated predictions of impacts of different management options on ground water, the County needs to establish long-term monitoring wells and gauges. When more data becomes available, including geological data, the County could begin to conceptualize its ground water system. The Team recognizes that the movement and availability of ground water is a difficult science, and that it will be at least five years before the a predictive model for ground water can be developed. It is therefore recommended that other tools for decision-making be developed in the near-term. Specifically, the Team recommends that the County consider selecting either the MOD-FLOW or SUTRA 3-D models for use as early as possible in Phase II. Either of these tools can be used to identify: (a) areas at risk of low base flow; and (b) areas important for ground water recharge.

**D. Phase III Modeling** -- For groundwater, the Team also recommends a later Phase III modeling effort in which the County would eventually develop and use a ground water model that can predict availability of groundwater.

## **V. Data Management and Protocols**

**A. Current Data Availability** -- Data are a major component of the watershed plan, and there is a need for more attention and resources to be directed to data management and acquisition. The SWMS Team agrees that data and studies currently available are sufficient to provide the initial prioritization and snapshot assessment envisioned in Phase I of the proposed Scope. However, the SWMS Team recommends that the integrity of existing data be examined carefully before using it in any assessment as not all existing data is relevant to the assessment's purpose, and some is old or perhaps faulty.

**B. Central Database and Data Coordinator/ Office** -- A common database needs to be created to store water quality and quantity data from the many data collection entities working in the County. It is important that there be one data "coordinator" or management focal point that assembles data and establishes standard data collection and management protocols. The Team also recommends that the County designate a new position or office with the task of providing central data coordination and management because volunteer efforts are not sufficient to accomplish this task.

**C. Monitoring** -- A combination of monitoring approaches is needed. One approach, suggested for use during Phase I of the Scope, is to use probabilistic-based (statistical) monitoring, applied Countywide to provide baseline, and snapshot data on watershed conditions for tracking progress. Another important approach, suggested for Phase II of the Scope, is to establish an on-going system of permanent monitoring stations to monitor progress over time. Lastly, the SWMS Team recommends analyzing and reporting monitoring data on a periodic basis to ensure relevant data are being collected.

**D. Stream Survey Data** -- Stream surveys will eventually be needed to develop data needed for detailed implementation plans to protect or restore priority stream segments identified in subwatershed plans.

**E. Data Collection Needs** -- It is important that a number of data and stream quality studies be incorporated into the assessment and watershed characterization effort. There is a need decide upon a means to quickly gather and assess these existing data for use in the County-wide assessment based on costs and the needs listed below. All new data collection should follow data collection protocols used by existing studies, or State-endorsed monitoring guidelines.

1. The County should consider making a commitment to inventory, map and monitor all water resources within the County's watersheds.
2. There is a need to establish a network of on-going monitoring stations to supplement the County-wide assessment and subwatershed characterization and to assist with the evaluation and updating of the Watershed Plans over the years.
3. A flow gauging network should be established to help monitor in-stream flow because maintaining ecologically healthy streams is a concern for the future of Loudoun's waterways.
4. GIS data needs to be incorporated into the Watershed Management Planning effort, and a means found for making GIS data available to the public in an understandable format.

## **VI. Criteria for Prioritizing Problems and the Development of Subwatershed Plans**

**A. Need for Criteria**-- The SWMS Team agreed that it is important to establish County-wide prioritization criteria to guide the Watershed Planning effort. Specifically, prioritization criteria should help identify which subwatershed Plans are developed first, and where implementation should first be initiated. It is understood that any plan should be implemented incrementally so that identified priority areas can be addressed first.

**B. Criteria Guidelines** -- The Team recommends the following prioritization criteria, and notes that these criteria will need to be weighted or scored to help establish priorities.

1. Give priority to rectifying pre-existing conditions (retrofits).
2. Prioritize areas needed for source water protection.
3. Give priority to drinking water supply recharge areas.
4. Give top priority to meeting state and federal regulation requirements.
5. Give high priority to development-pressure areas, or areas on the cusp of change for future build-out.
6. Give priority to sensitive areas, such as headwaters, groundwater recharge areas, and wetlands.



7. Give priority to situations where human health concerns exists due to possible septic or groundwater contamination.
8. Prioritization should take into account the different characterizations amongst sub-watersheds such as size, urban, rural, East, West, soil type, farming, drinking water supply shed, etc.
9. Priority should be given to protecting undeveloped or minimally developed subwatersheds.
10. Give consideration to traffic impacts and stream crossings in VDOT corridors.
11. Give priority to implementing projects that are the most efficient and will get the most 'bang-for-the-buck' such as watersheds with the greatest potential for efficient reduction of nutrients (MS4 offsets, nutrient trading).

## VII. Funding

**A. Funding Strategy** -- Funding is a critical part of the Watershed Planning process, and the Team's recommendation for a funding strategy for the Watershed Planning process is below. In addition, the Team developed a list of potential sources of funding, principles to consider when seeking funding, and other related information. This information may be found in the March 2006 SWMS meeting summary.

**B. Dedicated Funding** -- The Team emphasizes the need for a dedicated source of funding for watershed planning from within the County. There are many potential benefits from watershed planning, such as being aware, proactive and prepared for new stormwater and nutrient cap regulations that are forthcoming. Creating a dedicated source of funding is important to ensure a successful Watershed Management Planning effort to help meet new regulatory compliance requirements. The Fairfax County model of property tax allocation is a good model of successful watershed planning funding. Two strategies were identified as potential dedicated sources of funding:

1. Earmark a portion of the "rollback" tax (the tax assessed when property land use change is designated).
2. Consider reducing the personal property tax rate reduction that partially offsets the increase in assessed value ("equalize less") and consider earmarking a portion of that for watershed planning.

**C. Grant Funding** -- Consider identifying sources of grant funding and corporate sponsorship for both a short-term and long-term source of funding for watershed planning, but especially in the short-term while a long-term funding strategy is being created. The SWMS Team recognizes that significant staff time is required to administer grants.

**D. Targeted Funding**-- Consider developing sources of funding for critical areas identified in the watershed plan. In addition, consider phases in watershed planning when looking for and dedicating sources of funding, as fewer financial resources may be needed for Phase I than Phase II.

**E. Existing Funding**-- Evaluate, prioritize, and possibly reallocate existing funding resources to determine if those resources could be applied to watershed planning.

**F. Bay Act Funding**-- Consider the possibility of Loudoun County adopting the Chesapeake Bay Preservation Act (CBPA), which may be a potential source of funding. [The Team notes that extra funding could be available to Loudoun County because no other Counties adjacent to Loudoun have yet adopted the CBPA. **– one person suggested deleting this sentence.**] However, there could be regulatory implications that would require careful consideration.

**G. In-kind--** Consider significant financial contributions from in-kind sources such as citizen groups and the development community.

## **VIII. Stakeholder/ Citizen Involvement In the Watershed Planning Effort**

**A. Valuing Outcomes --** The SWMS Team agreed that the success of watershed management planning in Loudoun County ultimately depends on people valuing the outcomes and contributing to the watershed plan implementation activities. The planning process should therefore involve people in the development of the Watershed Management Plans to enhance the plan's value to citizens.

**B. Engaging Citizens --** Overall, the Team agreed that it is essential for the planning process to create ways that make it easy for Loudoun citizens to be informed, engaged, and involved. Ideas might include having planning leaders attend meetings of different citizens' groups to reach citizens who might be difficult to reach otherwise, creating a website, conducting workshops, creating other forums to engage citizens, and providing educational resources. It is important to "go beyond the choir" to engage citizens who might not otherwise be involved in the Watershed Management Planning process and Plan implementation. Outreach strategies also need to consider social justice issues to ensure that actual implementation strategies are accessible to people of all socio-economic levels.

**C. Methods to Involve Stakeholders --** To ensure stakeholder involvement throughout planning and implementation, the Team recommends that the County adopt the following approaches:

1. Create an inventory of County organizations that are stakeholders in the watershed plan, i.e., organizations whose work or mission relates to the goals of the watershed plan, including conservation and environmental interests, historic preservation, development, business, and agriculture. The SWMS participant list may be used as an initial document for this inventory.
2. Convene a County-wide Stakeholder Steering Committee with representation of diverse interests to help guide the county-wide Watershed Management Planning process as previously outlined in Section III, D.4. This committee should include liaisons from any subwatershed committees (e.g., Catoclin) as well as resource people and Loudoun County staff.
3. Seek guidance from the County-wide Stakeholder Steering Committee and remain flexible in determining, for each individual watershed planning effort, the form of citizen involvement that is most appropriate for that watershed (e.g., stakeholder committees, task forces, *ad hoc* groups, focus groups, workshops, forums, presentations to homeowner associations (HOAs), etc.).
4. Consider using existing stakeholder groups (e.g., Loudoun Watershed Watch, Northern Virginia Business Industry Association, Soil and Water Conservation District, etc.) as forums to enlist citizen engagement in the Watershed Management Planning effort.
5. Involve schools and students, and use the schools as a forum to involve citizen in the planning process.
6. Recognize that parks and streamside trails are valued community resources that can be used to engage citizens in the planning and implementation processes.
7. Consider using citizen volunteers to conduct some of the public education and outreach initiatives during the planning process to relieve the burden on County staff and to engage citizens in working with their neighbors.

## **IX. Education**

**A. Informed Citizenry** -- The Watershed Planning process should include a strong education component to create a more informed citizenry and to raise the awareness of citizens regarding watershed management needs. Further, the educational component should not be designed only for the Plan but also for its implementation.

**B. Strategies** -- The SWMS Team provides the following recommendations and guidelines for the County's outreach and education efforts.

1. Use existing education/outreach programs to avoid 'recreating the wheel'.
2. It is important that education and outreach efforts stay independent of the political arena.
3. It is important during the planning process and as part of the Plan itself to provide new septic owners with concrete skills and knowledge about monitoring and maintaining septic systems.
4. Use stream valley parks as a venue for education and outreach.
5. Use education and outreach efforts to raise awareness of existing regulations and the need for compliance.
6. It is important to involving the schools and students in the Watershed Management Planning process.

## **X. Policy and Regulations**

**A. Guidelines Regarding Policies and Regulations** -- The SWMS Team agreed on the following guidelines for addressing policies and regulations in the Plan.

1. The Plan should be designed to integrate land use policies and tools such as Zoning Ordinance, the Facilities Standards Manual, transportation planning, etc.
2. The Plan should support compliance and enforcement of existing regulations and/or recommend changes to County regulations not supportive of watershed protection.
3. The Stormwater permitting program is still under development, and other programs will need to be used in conjunction with the Stormwater program for addressing watershed problems.
4. Watershed planning strategies should be mindful of Virginia's Dillon Rule legal framework. Legal or other expert opinions should be obtained when possible to resolve or clarify differing interpretations, such as inconsistent interpretations of court rulings. For instance, it would be helpful to obtain clarification about alternative septic systems, as there are different approaches being taken in Clarke and Fauquier Counties.
5. The Plan should incorporate and address the TMDL regulations and guidelines of the Virginia Department of Environmental Quality and Department of Conservation and Recreation.

**B. Guidelines for Handling Issues** -- The SWMS Team agreed on the following guidelines for how to handle issues that arise during the Watershed Management Planning process that impact policies and regulations. Some policy recommendations may apply to only one of the County's watersheds, while others may apply to the entire County.

1. Those policy recommendations that are applicable to the entire County should be lifted out of the individual watershed planning efforts, and placed on a separate and faster track for consideration by the Board of Supervisors (BOS), so that the policy

recommendations are not on hold while the remainder of that watershed plan is being finished.

2. Recommendations for policy changes should be fed into the General Plan as proposed amendments and, where applicable, as amendments to the Zoning Ordinance and Facilities Standards Manual (FSM).

## **XI. Coordination of County Authorities**

**A. Coordination Strategies** -- Creating easy and efficient mechanisms for internal County coordination during the planning process and Plan implementation will be essential for success. Watershed planning is complex, involving multiple sources of data, multiple skill sets, and multiple County departments. To accomplish this goal, the SWMS Team recommends the following strategies.

1. **Designate Watershed Authority**-- The BOS should designate where leadership for watershed management coordination will reside, a critical factor for effective coordination.
  - a. In the short-term, for the purposes of the Watershed Management Planning effort, the SWMS Team recommends that the BOS designate either an existing Department or the Environmental Coordinator as the lead for the Watershed Planning effort.
  - b. In the long-term, given the likely increasing importance of watershed management in future years, the SWMS Team urges the BOS to consider the creation of an Environmental Services Department in its long-term planning for County staff.
2. **Designate Coordination Committees**-- In addition to designating an authority for watershed planning, it is important to establish clear standing mechanisms for coordination among the various County departments. The SWMS Team recommends that two levels of coordination be established.
  - a. **Staff-Level**-- First, to ensure a mechanism for staff-level technical communication, an inter-agency staff team should be established to meet regularly to coordinate and consult on the various watershed planning activities. This staff-level, inter-agency team may also include private partners as needed, although care must be given not to provide one stakeholder group an undue influence on decision making.
  - b. **Leadership-Level**-- Second, to ensure a mechanism for timely decision-making and guidance, an inter-agency leadership team should be designated to meet as needed to provide feedback, advice and guidance to the inter-agency staff team and watershed planning coordinator.
  - c. The SWMS Team members emphasized that neither mechanism is considered sufficient on its own given the highly complex nature of watershed planning and the need for numerous County departments to work together, share resources, and engage in joint decision-making.

## **XII. Involvement of County Decision-Makers**

**A. BOS Representation** -- The SWMS Team recommends that the BOS and incorporated Towns either (in order of preference) attend, or have representation, or be regularly informed during the Watershed Planning process. Additionally, the Planning Commission (PC) should be given the opportunity to participate and at a minimum should be kept informed throughout the process.

**B. Progress Reports** -- The SWMS Team recommends that presentations should be made to the following decision-making bodies throughout the watershed management planning process, in consultation with one or two Supervisors as appropriate. Presentations should reflect high-level County administration support by having the presentations opened by the County Administrator with technical information provided by the Environmental Coordinator or watershed planning program manager, as appropriate.

1. The Board of Supervisors
2. The Planning Commission
3. Incorporated towns (the Coalition of Loudoun Towns (COLT) may be an appropriate venue for these presentations, and it may also be appropriate to provide presentations to joint meetings of Town Councils and Planning Commissions)
4. The Water Resources Technical Advisory Committee (WRTAC)

### **XIII. Implementation of the Plan**

**A. Authority for Implementation** -- The Plan should specify and clarify who will implement each component of the Plan, by when, and who has designated authority for implementation.

**B. Coordination with Towns** -- The County should consider adding a provision to the MOU currently under development between it and incorporated Towns to enable and assist implementation of the watershed plan.

**C. Public-Private Partners** -- It is important for the County to work with and encourage its private sector partners to continue their ongoing activities in the watersheds throughout both the planning and implementation phases of the watershed management planning process.

**D. Implementation Steering Committee**-- The SWMS team recommends that a County-wide Stakeholder Steering Committee be established to ensure continuing citizen involvement in monitoring and assisting with implementation

### **XIV. Implementation of the DOC**

The SWMS Team recommends that on conclusion of its work, this Declaration of Cooperation be presented to the BOS and incorporated Towns for their review and approval. It should be presented to the Planning Commission and committees listed above (WRTAC, COLT) for their information.

### **XV. Evaluation of the Watershed Plan**

The SWMS Team agreed that the Watershed Management Plans should include a strategy for revisiting and updating the Plans over time to ensure that they remain living documents. These plan reviews should be conducted by the County in collaboration with the County-wide Stakeholder Steering Committee. An important component for assessing progress in achieving planning goals will be the water quality and stream health data collected under probability and trend monitoring approaches.

### **XVI. Issues requiring further discussion**

**TO BE FILLED IN**

### **XVII. Specific Commitments of SWMS Team**

Each signatory will create his/her own specific commitment that specifies such elements as:

1. Continuing role(s) of signatories through the Watershed Planning effort

2. Resources (monetary, in-kind, materials, etc.) willing to bring to Watershed Planning effort
3. Other commitments to the collaborative effort

**TO BE FILLED IN**